

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28033

Port of Hull Date of First Survey 22. 7. 14 Date of Last Survey Oct 13<sup>th</sup> 1914. No. of Visits 5  
 No. in on the Iron or Steel S.T. Restivo Port belonging to Gumaby  
 Reg. Book Lpt. 4 Built at Beverley By whom Cock Wilton & Gemmell When built 1914-10  
 Owners G. F. Heigh Owners' Address Brimby  
 Yard No. 300 B Electric Light Installation fitted by Campbell & Sherwood Ltd When fitted 1914-10

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

A Campbell & Sherwood four pole Compound wound dynamo, direct coupled to a Robey engine

Capacity of Dynamo 30 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard side of Engine room Whether single or double wire system is used Double

Position of Main Switch Board Stores bulkhead having switches to groups 3 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine room 3, Wheelhouse 7, & a switch in a convenient position to each light

If fuses are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch board to the cables of auxiliary circuits Yes and at each position where a cable is branched or reduced in size Yes and to each lamp circuit Yes

If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits Yes

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 75 per cent over the normal current

Are all fuses fitted in easily accessible positions Yes. Are the fuses of standard dimensions Yes If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Yes

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 5 of 32 CP + 43 of 16 CP arranged in the following groups:—

A Navigation lights each of 5 of 32 CP & 6 of 16 candle power requiring a total current of 8.8 Amperes

B Midships lights each of 24 of 16 candle power requiring a total current of 13.2 Amperes

C Aft lights each of 13 of 16 candle power requiring a total current of 7.15 Amperes

D lights each of candle power requiring a total current of Amperes

E lights each of candle power requiring a total current of Amperes

3 Mast head light with / lamps each of 32 candle power requiring a total current of Included in A Amperes

2 Side light with / lamps each of 32 candle power requiring a total current of " Amperes

2 Cargo lights of 4 of 16 candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. —

Where are the switches controlling the masthead and side lights placed In Wheelhouse

## DESCRIPTION OF CABLES.

Main cable carrying 29.15 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area

Branch cables carrying 13.2 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area

Branch cables carrying 8.8 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

Leads to lamps carrying 1.65 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 2.2 Amperes, comprised of 114 wires, each 38 S.W.G. diameter, .0032 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

In Accommodation - Lead Covered cable. In Engine & Boiler rooms - Lead Covered armoured & braided. In exposed places - V.I.R. in screwed galvanised pipe.

Joints in cables, how made, insulated, and protected None made

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage —

Are there any joints in or branches from the cable leading from dynamo to main switch board No

How are the cables led through the ship, and how protected Lead covered cables secured with brass saddles. Lead Covered armoured & braided cables & V.I. Pipe both secured with V.I. clips.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Yes.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered armoured & braided & sc. G.I. pipe.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered armoured & braided

What special protection has been provided for the cables near boiler casings Lead covered armoured & braided

What special protection has been provided for the cables in engine room Lead covered armoured & braided

How are cables carried through beams Fibre ferrules. through bulkheads, &c. W.T. glands

How are cables carried through decks Deck pipes flanged to decks

Are any cables run through coal bunkers Yes. or cargo spaces Yes. or spaces which may be used for carrying cargo, stores, or baggage Yes.

If so, how are they protected Lead covered armoured & braided

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage No

If so, how are the lamp fittings and cable terminals specially protected \_\_\_\_\_

Where are the main switches and fuses for these lights fitted \_\_\_\_\_

If in the spaces, how are they specially protected \_\_\_\_\_

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed Special C.B. sockets.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel \_\_\_\_\_

How are the returns from the lamps connected to the hull \_\_\_\_\_

Are all the joints with the hull in accessible positions \_\_\_\_\_

Is the installation supplied with a voltmeter Yes. and with an amperemeter Yes. fixed On Main Board.

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas \_\_\_\_\_

Are any switches, fuses, or joints of cables fitted in the pump room or companion \_\_\_\_\_

How are the lamps specially protected in places liable to the accumulation of vapour or gas \_\_\_\_\_

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 1000 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

Campbell & Shearwood & Co. Electrical Engineers Date Oct 29th 1914

COMPASSES.

Distance between dynamo or electric motors and standard compass 4 ft. About 35 ft.

Distance between dynamo or electric motors and steering compass " " "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
8.8	6	6	
.55	1	1	

Have the compasses been adjusted with and without the electric installation at work at full power \_\_\_\_\_

The maximum deviation due to electric currents, etc., was found to be \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

PHILIP DOOK, WELTON & GEMMELL LTD Asumell Builder's Signature. Date Oct 31st 1914

GENERAL REMARKS. This vessel has been fitted with an electric light installation as above, the workmanship is good on completion it was tested under full working conditions & found satisfactory

It is submitted that this vessel is eligible for THE RECORD. Elec. light. Frank L. Stinger Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute \_\_\_\_\_

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.